

legal jargon that might create a binding commitment, which I was not willing to give, particularly without further information about his plans. I therefore declined to sign the form as requested.

3. In the alternative, Mr. Daly then asked me to draft a brief letter expressing my general willingness and ability to negotiate a lease for space on our roof. He asked me to quote a ballpark figure for rent, which I did by randomly choosing the figure \$350 per month because I was not quite sure what he had in mind. Again, the clear impression he conveyed was that he needed roof space for a ten or fifteen foot antenna. We did not discuss particulars about the potential terms of a lease, nor did we discuss the specifics of his plans for the antenna. Attached to this Affidavit as Appendix C is a copy of the letter that I provided to Mr. Daly at the end of his visit.

4. Over two and a half years later, on October 16, 1991, I received a visit from ~~someone~~ two individuals whose name names I do not recall who. One of the visitors said that he was the "new owner of the right rights" to place an antenna on our roof. ~~This was news to me since, but I was not sure what he meant because~~ I knew I had not given such a right to anyone. Nevertheless and I had not been contacted about the matter since Mr. Daly's visit in 1989. To the best of my recollection, I simply assumed they had received permission to build the

facilities and that they were now looking to secure a suitable site. With that understanding, I spoke with the person then about whether our facilities would suit his their needs. He One of the visitors told me that he they would require a dust free area for his their equipment, but I explained that, as a cement concrete company, we could not assure him a provide them with an area that would be dust free environment. Consequently, he, in response, the visitors told me that he did not think the our site would not be suitable, and he and our conversation ended, they left after giving me the clear impression that he they had no plans to pursue the matter with us further. Attached to this Affidavit as Appendix D is a copy of a note that I wrote and placed in my files at the conclusion of his their visit.

5. I recently have been shown the engineering sketch attached to this Affidavit as Appendix E. I understand that Raystay submitted this sketch to the FCC in applications that it filed in March 1989 for two low power television station licenses in Lancaster. In reviewing the sketch, I can state with certainty that I did not tell Mr. Daly that Ready Mixed would consider leasing roof space for a structure like the one depicted in the diagram. As stated above, I was never fully aware what Mr. Daly was planning. He Although he led me to believe that the antenna would be approximately ten or fifteen feet high, he could not answer my questions regarding the exact size of the antenna, and he did not explain to me how it would

be mounted. I certainly was not aware that he was planning to ask the FCC for authority to construct a 97-foot structure sufficient to support two broadcast antennas. If Mr. Daly had told me of his Raystay's true plans, I would have had immediate concerns about the roof's capacity to hold such a structure as well as the potential interference to other communications facilities that the structure might have caused. The section of the roof upon which Raystay has proposed to mount its antenna is simply a shed that was constructed to protect a conveyor head and some aggregate bins from the weather. The shed is made of 2-by-4's into which steel sheathing has been nailed. The shed has no steel foundation, and it would be structurally impossible for it to support an object like the one depicted in Raystay's sketch. Therefore, had I been made aware of Raystay's plans, my conversation with Mr. Daly would have ended and I would never have provided him with the letter attached to this Affidavit as Appendix c.

6. I also have reviewed the statement attached hereto as Appendix F, which I understand was submitted to the FCC by Raystay in December 1991 and again in July 1992 to report the status of Raystay's construction efforts. To the best of my knowledge and belief, two assertions made in that statement are untrue false. The first such assertion is that Raystay "has entered into lease negotiations with representatives of the owners of the antenna site specified in the applications..." As

Vice-President and an owner of Ready Mixed, I have principal supervisory responsibility over all aspects of the company's operations, including the negotiation and approval of all lease agreements involving the company's facilities. To the best of my knowledge, Ready Mixed has had no lease negotiations with Raystay or any representative of that company at any time. Indeed, apart from Mr. Daly's visit in February 1989, and the visit in October 1991 described in paragraph 4 above, no representative of Raystay has contacted Ready Mixed at any time about the matter. I have checked with the other two owners of Ready Mixed and they have confirmed that no such negotiations or contacts have occurred.

7. Likewise, I am aware of no visit to Ready Mixed by any representative of Raystay other than visits described in paragraphs 2 and 4 above. ~~And, to the best of my knowledge, during these visits only a single individual was present.~~ The final visit, which occurred on October 16, 1991, lasted only a few moments about fifteen minutes and resulted in one of the visitor ~~Visitors~~ telling me that our facilities would not suit his Raystay's needs because of the dust. ~~Thus~~ To the best of my knowledge, the visitors did not inspect Ready Mixed's facilities and there were no discussions with me about "site preparation work" or "modifications [that would] need to be done at the site." In fact, as soon as I told the visitors that it could not provide them with a dust free environment, the conversation

~~ended and they left. Therefore, if the statement contained in Appendix F is meant to suggest that representatives of Raystay have inspected our roof or made any other preparations to initiate construction at our facility, that claim is not true false.~~ To the contrary, as stated in paragraph 4 above, I was led to believe from my conversation with the October 1991 ~~visitor he~~ ~~visitors that they~~ had no further interest in our facilities, and I have not heard from him ~~any representative of Raystay~~ since.

8. I understand that this Affidavit may be submitted to the FCC, and I have ~~provided it freely and without the payment or offer of any consideration.~~

I hereby certify that the statements made herein are true and correct to the best of my knowledge and belief, and are submitted in good faith.

\_\_\_\_\_  
Edward Rick, III

COMMONWEALTH OF PENNSYLVANIA )  
COUNTY OF LANCASTER )

ss:

Sworn to and subscribed before me this \_\_\_\_ day of April, 1993.

Notary Public

My commission expires \_\_\_\_\_

~~APPENDIX F~~



LEWIS COHEN

GENORIC  
BROADCASTING

202

466-8565



LAW OFFICES

MULLIN, RHYNE, EMMONS AND TOPEL  
PROFESSIONAL CORPORATION

1000 CONNECTICUT AVENUE - SUITE 500  
WASHINGTON, D. C. 20036-5383

(202) 659-4700 TELECOPIER (202) 872-0604

EUGENE F. MULLIN  
SIDNEY WHITE RHYNE  
NATHANIEL F. EMMONS  
ROBERT E. LEVINE  
HOWARD A. TOPEL

MARK N. LIPP\*  
CHRISTOPHER A. HOLT  
J. PARKER CONNOR  
OF COUNSEL  
\*NOT ADMITTED IN DC

May 14, 1993

Mr. Edward Rick, III  
Ready Mixed Concrete Company of  
Lancaster Pennsylvania  
36 Erick Road  
Lancaster, Pennsylvania 17604

Dear Ed:

I thought you might be interested in seeing how we put your affidavit to good use. The enclosed motion is the second of three that we filed yesterday against Glendale Broadcasting Company, whose 51% principal, George Gardner, is the owner of the Raystay Company. Your affidavit and that of Mr. Barry March, whose statement is quite similar to yours, are included in the enclosed motion as Attachments 19 and 20, respectively. Additionally, the affidavits are referred to in the motion on pages 32-45.

Unless Glendale is granted an extension of time by the FCC administrative law judge who is presiding over our case, which we think is likely, it will have to respond to the motion by May 26th. We then will have an opportunity to reply to Glendale's response within five to eight days of that response.

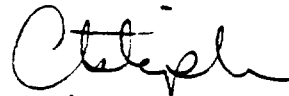
Your affidavit and that of Mr. March have both raised serious questions about Mr. Gardner's character for truthfulness. Consequently, Glendale or one of its representatives may try to contact you to discuss your statement. While you are free, of course, to respond to any such inquiry, you have no obligation to do so. If you are contacted, we would appreciate your letting us know of that fact as soon as possible.

Mr. Edward Rick, III  
May 14, 1993  
Page 2

We will keep you informed of developments in the case that may relate to your affidavit as they arise. In the meantime, please feel free to contact either me or Nathaniel F. Emmons, who is a partner in our firm, should you have any questions regarding this matter.

Once again, thank you for your kind assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Christopher A. Holt".

Christopher A. Holt

CAH/wp  
Enclosure

160

APPROVED BY  
3/25/89  
FCC

**COPY**

APPLICATION FOR AUTHORITY TO CONSTRUCT OR  
MAKE CHANGES IN A LOW POWER TV, TV TRANSLATOR OR TV BOOSTER STATION  
(Carefully read instructions before filling out form - RETURN ONLY FORM TO FCC)

For Commission Fee Use Only

**RECEIVED**

MAR 9 1989

FCC

FEE I 8705263

FEE TYPE:

FEE AMT:

ID SEQ:

For Applicant Fee Use Only

Is a fee submitted with this application? ☒ Yes ☐ No

If No, indicate reason therefor (check one box)

☐ Nonfeeable application

Fee Exempt (See 47 C.F.R. Section 1.1112)

☐ Noncommercial educational licensee

☐ Governmental entity

**DUPLICATE**

SECTION I - GENERAL INFORMATION

For Commission Use Only

File No. BPTTL 890309PA

1. Name of Applicant

Raystay Company

Address

P.O. Box 38

City

Carlisle

State

PA

Zip Code

17013

Telephone No. (include area code)

(717) 245-0040

2. This application is for: (check one box)

☒ Low Power Television

☐ TV Translator

☐ TV Booster

(a) Proposed Channel No. (b) Community to be served:

23

City

Lancaster

State

PA

(c) Check one of the following boxes:

☒ Application for NEW station

☐ MAJOR change in licensed facilities; call sign: \_\_\_\_\_

☐ MINOR change in licensed facilities; call sign: \_\_\_\_\_

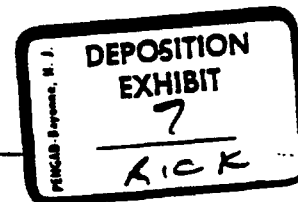
☐ MAJOR modification of construction permit; call sign: \_\_\_\_\_

File No. of Construction Permit: \_\_\_\_\_

☐ MINOR modification of construction permit; call sign: \_\_\_\_\_

File No. of Construction Permit: \_\_\_\_\_

☐ AMENDMENT to pending application; Application file number: \_\_\_\_\_



NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Sections I and VII and those other portions of the form that contain the amended information.

NOTE: Applicants for new stations only:

1. Applicant is (check one of the following):

☐ Individual

☐ General Partnership

☒ Corporation

☐ Other

☐ Limited Partnership

☐ Unincorporated Association

(a) If the applicant is a legal entity other than an individual, partnership, corporation or unincorporated association, describe in an Exhibit the nature of the applicant.

Exhib.  
N.

(b) For LPTV and TV translator applicants only:

If the applicant is an individual, submit as an Exhibit the applicant's name, address and telephone number (including area code).

Exhib.  
N. A.

If the applicant is a partnership, whether general or limited, submitted as an Exhibit the names, addresses, and telephone numbers (including area code) of all general and limited partners (including silent partners), and the nature and percentage of the ownership interest of each partner.

Exhib.  
N. 2

If the applicant is a corporation or an unincorporated association, submit as an Exhibit the names, addresses and telephone numbers (including area code) of all officers, directors and other members of the governing board of the corporation or association and the nature and the percentage of their ownership interests in the applicant (including stockholders with interests of 1% or greater).

Exhib.  
1

2. For LPTV and TV translator applicants only, submit as an Exhibit a list of all other new applications filed during the same window period as this application in which the applicant or any principal of the applicant has any interest. Include the percentage of that interest for each listed application, as well as the other applicant's name (if different) and the channel number and location of the proposed station.

Exhib.  
2

NOTE: No more than five (5) applications for new low power TV or TV translator stations may be filed during a single window period by any applicant, or by any individual or entity having an interest of 1% or more in applications filed in the same window period. This limit does not apply to minor or major change applications or to TV booster applications.

#### CITIZENSHIP AND OTHER STATUTORY REQUIREMENTS

3(a) Is the applicant in compliance with the provisions of Section 310 of the Communications Act of 1934, as amended, relating to interests of aliens and foreign governments?

☒ Yes

(b) Will any funds, credit, or other financial assistance for the construction, purchase or operation of the station(s) be provided by aliens, foreign entities, domestic entities controlled by aliens, or their agents?

☐ Yes

If Yes, provide particulars as an Exhibit.

Exhib.

4.(a) Has an adverse finding been made, or an adverse final action taken by any court or administrative body as to the applicant or any party to this application in a civil or criminal proceeding brought under the provisions of any law related to the following: any felony; broadcast-related antitrust or unfair competition; criminal fraud or fraud before another governmental unit; or discrimination?

☐ Yes

(b) Is there now pending in any court or administrative body any proceeding involving any of the matters referred to in 4(a)?

☐ Yes

If the answer to 4(a) or 4(b) is Yes, attach as an Exhibit a full disclosure concerning the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), a statement of the facts upon which the proceeding was based or the nature of the offense alleged or committed, and a description of the current status or disposition of the matter.

Exhib.

REMINDER: Do not complete the following without reading carefully the definitions and other information set out in the foregoing pages.

### CERTIFICATION OF PREFERENCES

#### MINORITY

1. The applicant certifies that it is entitled to and seeks to claim minority preference.

☐ Yes ☐

If yes, complete the following:

Name	Address	Percentage interest in the applicant	Minority Group
------	---------	---	----------------

#### DIVERSIFICATION PREFERENCE

2. The applicant certifies that it and/or its owners have no interest, in the aggregate, exceeding 50 percent in any media of mass communications.

☐ Yes ☐

If Yes, DO NOT respond to questions 3 and 4.

3. The applicant certifies that it and/or its owners have no interest, in the aggregate, exceeding 50 percent in more than three mass communications media facilities.

☐ Yes ☒

4. The applicant certifies that it and/or its owners have no interest, in the aggregate, exceeding 50 percent in a media of mass communications in the same area to be served by the proposed station.

☒ Yes ☐

# SECTION VI - EQUAL EMPLOYMENT OPPORTUNITY PROGRAM

1. For Low Power TV applicants, will this station employ on a full-time basis five or more persons?

☐ Yes ☐

If Yes, the applicant must include an EEO program called for in the separate Broadcast Equal Employment Opportunity Report (FCC Form 396-A).

## SECTION VII - CERTIFICATIONS

1. For new station and major change applicants only, the applicant certifies that it has or will comply with the public notice requirement of 47 C.F.R. Section 73.3580(g).

☒ Yes ☐

2. For applicants proposing translator rebroadcasts who are not the licensee of the primary station, the applicant certifies that written authority has been obtained from the licensee of the station whose programs are to be retransmitted.

☐ Yes ☐

N.A.

Primary station proposed to be rebroadcast:

Call Sign	City	State	Channel No.

3. The applicant certifies that it has contacted an authorized spokesperson for the owner of the rights to the proposed transmitter site and has obtained reasonable assurance that the site will be available for its use if this application is granted.

☒ Yes ☐

That person can be contacted at the following address and telephone number:

Name	Edward Rick III			Mailing Address or Identification	Realy-Mix Concrete Co. of Lancaster, PA	
City	Lancaster	State	PA	ZIP Code	17603	Telephone No. (include area code)
						(717) 394-0637

The APPLICANT hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and that all exhibits are a material part hereof and incorporated herein.

The APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application with which it may be in conflict.

In accordance with 47 C.F.R. Section 1.65, the APPLICANT has a continuing obligation to advise the Commission, through amendments, or any substantial and significant changes in information furnished.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT U.S. CODE, TITLE 18, SECTION 1001.

I certify that the statements in this application are true, complete and correct to the best of my knowledge and belief, and are made in good faith.

Name of Applicant	Raystay Company	Signature	<i>David A. Gardner</i>
Title	Vice President	Date	March 7, 1989

EXHIBIT 1

The officers, directors, and ownership of voting stock in Raystay Company is as follows:

<u>Name</u>	<u>Officers</u>	<u>Percentage of Voting Stock</u>
George F. Gardner	President, Treasurer and Director	50.06%
Estate of Marian B. Gardner, George F. Gardner and David A. Gardner Co-Executors	- ---	25.55%
David A. Gardner R.D. 1 Landisburg, PA 17040	Vice-President, Secretary, and Director	8.13%
Michael C. Gardner 580 Boxwood Lane Carlisle, PA 17013	---	8.13%
David A. Gardner Trustee For Jon C. Gardner c/o Box 38 Carlisle, PA 17013		8.13%



EXHIBIT 2

Raystay Company is filing the following five low power television applications in the window period ending March 10, 1989.

<u>Location of Proposed Station</u>	<u>Channel Number</u>
Red Lion, PA	56
Lebanon, PA	55
Lebanon, PA	38
Lancaster, PA	23
Lancaster, PA	31

EXHIBIT 3

Mr. George E. Gardner, President, Director and principal stockholder in Raystay company, is the President, Director, and sole stockholder in Adwave Company (Adwave), applicant for construction permit for a new FM broadcast station at Fort Lauderdale, Florida (MM Docket No. 84-1113, File No. BPE-830510AL). In a Partial Initial Decision of Administrative Law Judge Joseph Stirmer (FCC 870-20) released June 4, 1987, a misrepresentation/lack of candor issue was decided adversely to Adwave. The Commission had previously directed that all appeals in such cases involving applicants seeking licenses held by RKO General, Inc., be stayed, but has recently set March 16, 1989, as the date for filing of exceptions to such Partial Initial Decisions. Accordingly, Adwave will timely file with the Review Board its appeal of the Partial Initial Decision.

ENGINEERING STATEMENT IN SUPPORT OF AN  
APPLICATION FOR A  
CONSTRUCTION PERMIT FOR A  
NEW LOW POWER TELEVISION STATION  
ON CHANNEL 23 IN LANCASTER, PENNSYLVANIA

On Behalf of  
RAYSTAY COMPANY

EE-1

March 3rd, 1989

ENGINEERING STATEMENT IN SUPPORT OF  
AN APPLICATION FOR A  
CONSTRUCTION PERMIT FOR A  
NEW LOW POWER TELEVISION STATION  
ON CHANNEL 23 IN LANCASTER, PENNSYLVANIA

On behalf of  
RAYSTAY COMPANY

EE-1

Index:

1. Declaration of Engineer
2. FCC Form 346, Section II
3. Narrative Statement
4. Fig. 1A, Topographic Map of Proposed Site
5. Fig. 1B, Section of Topographic Map
6. Fig. 2, General Area Map
7. Fig. 3, Vertical Plan Sketch of Proposed Antenna & Supporting Structure
8. Fig. 4, Tabulation of Bogner type B16UA Relative Field Strength
9. Fig. 5, Horizontal Plot of Ant Relative Field Strength Oriented at N-286-E
10. Fig. 6, Vertical Plane Shape Factor for B16UA Antenna with -2 Degrees Beam Tilt

ENGINEERING STATEMENT IN SUPPORT OF AN  
APPLICATION FOR A  
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NEW LOW POWER TELEVISION STATION  
ON CHANNEL 23 IN LANCASTER, PENNSYLVANIA  
On behalf of  
RAYSTAY COMPANY

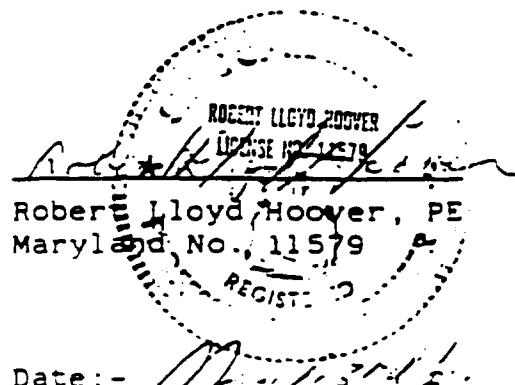
EE-1

DECLARATION

Robert Lloyd Hoover declares and states that he is a Registered Professional Engineer in the State of Maryland and seven other states. He further states that he has been in broadcast engineering since 1948 to date.

He states that he has been retained by Raystay Company for the purpose of preparing an application for a Construction Permit for a new Low Power Television Station on Channel 23 in Lancaster, Pennsylvania.

He further states that the calculations, exhibits and measurements reported herein were made by him personally or under his supervision and all facts contained herein are true of his own knowledge, except where stated to be on information or belief, and as to those facts, he believes them to be true. I declare under penalty of perjury that the foregoing is true and correct.

  
Robert Lloyd Hoover, PE  
Maryland No. 11579

Date: - March 14, 1970

## 1. Facilities requested:

Output Channel No.	Transmitter Rated Power Output	Proposed Community(ies) to be served	
23	1.0 kilowatts	City LANCASTER	State PA

## Frequency Offset (check one)

☐ No offset      ☒ Zero offset      ☐ Plus offset      ☐ Minus offset

Translator Input Channel No. n/a

## 2. Proposed transmitting antenna location:

City <b>Lancaster</b>	State <b>PA</b>	County <b>Lancaster</b>
Address or other description of location: <b>Erick Rd Lancaster, PA</b>		Geographical coordinates of transmitting antenna to nearest second  North Latitude      West Longitude  <u>40</u> ° <u>03</u> ' <u>47</u> " <u>76</u> ° <u>19</u> ' <u>09</u> "

Attach as an Exhibit a map or maps (preferably topographic, if obtainable, such as Geological Survey quadrangles) of the area of the proposed transmitting antenna location shown drawn thereon the following data:

Exhibit No.  
**EE-1**

- a. Scale of kilometers  
b. Proposed transmitting antenna location accurately plotted.

3. Transmitter:	Make <b>Acrodyne</b>	Type No. <b>TLU/1KACT</b>	Output Power P <sub>2</sub> <b>1.0 kilowatts</b>
4. Transmission line:	<b>Andrew</b>	LDF7-50A	Length <b>90 ft</b> Rated efficiency E for length given (decimal fraction) <b>0.8898</b>

5. Transmitting antenna      ☒ Directional "off-the-shelf"      ☐ Directional Composite (Multiple Antennas)      ☐ Non-Directional

Manufacturer <b>Bogner</b>	Model <b>B16UA</b>	Description <sup>1</sup> <b>Slot antenna</b>
Orientation of main lobe <sup>2</sup> Orntd: 286 ° T lobes: 286 ° T 356 ° T & 216 ° T	Overall antenna structure height above ground <sup>3</sup> <b>57.0 meters</b>	Elevation of Site <sup>4</sup> <b>103.6 meters</b> Power gain G (multiplier) in the horizontal lobe of maximum radiation relative to a halfwave dipole <sup>5</sup> $G_{\text{horz}} = 32 \times (0.5)^2 = 8$ for -2 deg beam tilt

Effective radiated power (ERP)  
(ERP=P X E X G) 7.12 kilowatts

Height of antenna radiation center above ground 41.8 meters  
Height of antenna radiation center above mean sea level 137 ft  
145.4 meters  
477 ft

1 Give basic type using general descriptive terms such as half-wave dipole, "bow-tie" with screen, corner reflector, 10 element Yagi, 4 element in-phase array, two stacked 5 element Yagis, etc.

2 For directional antennas in the horizontal plane show the direction of the main radiation lobe(s) in degrees with respect to true north in a 360 degree horizontal azimuth, numbered clockwise, with true north as zero azimuth.

3 Show overall height above ground in meters to topmost portion of structure, including highest top mounted antenna and beacon if any.

4 Show the ground elevation above mean sea level in meters at the base of the transmitting antenna supporting structure.

5 Give the actual power gain toward the radio horizon.

6 This is equal to the sum of the site elevation and the height of the antenna radiation center above ground.

11

recent ANSI C95.1 1982 exposure guidelines.

In the UHF TV Band the ANSI standard would limit exposure to human beings to less than  $f/300 \text{ mW/cm}^2$ , where  $f$  is frequency in megahertz. For Channel 23 the ANSI Radio Frequency Protection guideline would be less than  $1.75 \text{ mW/cm}^2$ . Measurements on UHF TV antennas after prediction verify that as a least upper bound the Power Density, PD, would be

$$PD = \frac{EIRP}{40\pi r^2} \quad \text{mW/cm,}$$

where EIRP is the Effective Isotropic Radiated Power in watts and  $r$  is the appropriate slant distance from the antenna radiation center in meters, for example, to head height or 7 feet (2.13 meters) above the level of the building roof. During normal programming the EIRP is approximately equal to 0.4 times the visual effective radiated power plus the aural effective radiated power times 1.64, where consideration would be given to the square of the Vertical Plane shape or form factor for the antenna,  $f(\theta)$ , viz,

$$EIRP \sim (1.64)[(0.4)ERP_{vis} + ERP_{aur}] f^2(\theta)$$

EPA guidelines suggest a reflection co-efficient of 1.6 be adopted. Using this EPA guideline, an EPA value for the Power Density, PD, adjusted for such a reflection co-efficient would be

$$PD' = (1.6)^2 PD$$

The minimum distance from the Center of Radiation at head height above roof level would be (47-7) feet or 40 feet. The far-field region of a high gain UHF antenna does not obtain for approximately 1500 feet from the antenna. On the roof in the vicinity of the antenna, near-field theory applies. A cautious approach in such a near-field region would be to assume a Vertical Plane Shape factor of 0.25 albeit with a fixed slant range of 40 feet. In addition, the far-field EIRP value is assumed. This latter assumption presumes that the antenna has provided its full gain even in the near-field region. With these assumptions an EPA adjusted Power Density,  $PD'$ , becomes at head height at any place on the roof,

$$PD' = 1.405 \times 10^{-5} [(0.4)ERP_{vis} + ERP_{aur}] \text{ mW/cm}^2, \quad \text{on Channel 23.}$$

For a visual ERP of 28,472 watts and aural ERP of 2847 watts (that actually would not obtain until the far-field region in the main beam at the depression angle of -2

degrees), the EPA adjusted Power Density,  $PD'$ , becomes  $0.2 \text{ mW/cm}^2$ . This represents approximately 11.43 percent of the ANSI C95.1-1982 guideline of  $1.75 \text{ mW/cm}^2$  at 524 MHz.

The applicant has also applied for an LPTV Construction Permit on Channel 31 in Lancaster, where a similar Bogner B16UA antenna is proposed. The Channel 31 antenna is proposed to be mounted on the 30-ft tower above the Channel 23 antenna. In the event of Commission approval of both applications, a similar approach for the Channel 31 antenna is provided. The proposed Center of Radiation of the Channel 31 antenna would be (79-7) or 72 feet above head height on the roof. A value for the near-field Vertical Plane shape factor of 0.25 is assumed with a fixed slant range of 72 feet. A far-field Effective Radiated Power of 26,979 visual watts and 2698 aural watts is assumed. Using the same procedure as in the Channel 23 case, an adjusted EPA Power Density of  $0.058 \text{ mW/cm}^2$  is obtained. This represents approximately 3.04 percent of the ANSI guideline value of  $1.91 \text{ mW/cm}^2$  for the Channel 31 frequency of 572 MHz.

Adding the two percentages of ANSI allowable electromagnetic radiation cases for Channel 23 and Channel 31 yields approximately 14.5 percent of the ANSI standard. It can be seen that no radiation hazard will exist on the building roof at head height below the antenna, even with these cautious assumptions. A conservative estimate for the real-world Vertical Plane shape factor in the near-field region on the building roof for both antennas may possibly exceed 0.25, but the slant range was fixed for both antennas. Near the edge of the roof the near-field Vertical Plane shape factor may possibly increase in value but the inverse square of the slant range would become significantly smaller. Rather than assuming the far-field Effective Radiated Power value (at the -2 degree depression angle), it has been your affiant's experience<sup>\*/</sup> that the real-world

---

<sup>\*/</sup> For example, in February 1979 your affiant prepared a deposition for officials of the City of Winston-Salem, North Carolina that predicted the power density using near-field theory for WGNN-TV that would operate with 1500 kW from its antenna mounted on a 30-ft pedestal on top of the Wachovia National Bank Building. Later measurements after WGNN-TV was built confirmed that the predictions were within 10 percent of the measured values. In 1981, your affiant prepared a similar deposition for officials of Multnomah County, Oregon, on behalf of KRLK Broadcasting Corp. In the intervening years a number of predictions and corresponding measurements have been made by your affiant confirming that the power density as would be predicted for the near-field region using the appropriate near-field approach yields power density values generally less than predicted by far-field theory.

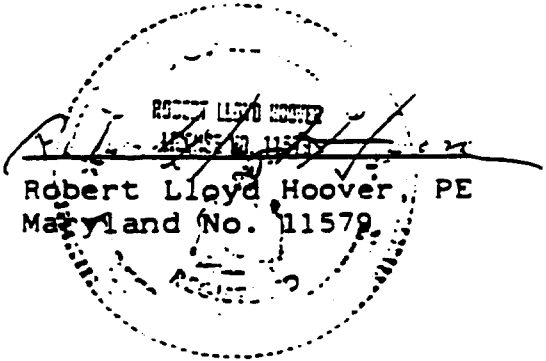


Power Density value in such a near-field region would be considerable less and approximately equal to the sum of the Power Densities obtained at head height on the roof from each individual slot or radiator of the antenna, with the Antenna Input Power divided between each such slot or radiator. The final Power Density result is considerable less than this rough approach indicates, but the analysis is rather detailed.

IV. SUMMARY

Raystay Company requests a Construction Permit for a new Low Power Television facility on Channel 23 with precise Zero Frequency Offset in Lancaster, Pennsylvania. The application is in full compliance with the Commission's final rules concerning Low Power Television stations.

March 3rd, 1989

  
Robert Lloyd Hoover, PE  
Maryland No. 11579